

Abstract

An enhanced method for the post processing, i.e. oxidation or stabilization, of carbon materials including, but not limited to, carbon foams, carbon fibers, dense carbon-carbon composites, carbon/ceramic and carbon/metal composites, which method requires relatively very short and more effective such processing steps. The introduction of an "oxygen spill over catalyst" into the carbon precursor by blending with the carbon starting material or exposure of the carbon precursor to such a material supplies required oxygen at the atomic level and permits oxidation/stabilization of carbon materials in a fraction of the time and with a fraction of the energy normally required to accomplish such carbon processing steps. Carbon based foams, solids, composites and fiber products made utilizing this method are also described.